



# *Birth Defects in Bayview/Hunters Point*

**I**n 1994, residents of Bayview/Hunters Point raised concerns that local environmental conditions might be linked to health problems, particularly breast and cervical cancer. Working with community members, the San Francisco County Health Department launched the Health and Environmental Project to address these concerns. The project includes a community health profile reviewing available health data for the area.

This report, by the California Birth Defects Monitoring Program, looks at birth defects in Bayview/Hunters Point. Residents had not reported any specific concerns about birth defects to the Health Department; this is simply one of many health outcomes reviewed.

## **STUDY DESIGN**

Following a protocol developed to respond to community concerns (*see page 3*), we examined the Program's birth defects registry data for 1983-1993, comparing findings from Bayview/Hunters Point (zip code 94124) to the rest of San Francisco County. We looked for the hallmarks seen when an environmental agent has been found to cause birth defects—a dramatic increase in a specific condition or unusual patterns in birth defects occurrence.

## **BIRTH DEFECTS RATES NOT UNUSUAL**

We found nothing noteworthy about birth defects rates or occurrence patterns in Bayview/Hunters Point.

### **Was the overall birth defects rate higher than expected?**

No. From 1983-1993, there were 276 babies with birth defects among the 6233 births to Bayview/Hunters Point residents.

- The overall rate in Bayview/Hunters Point was 44.3 per 1000 births; the rate in the rest of San Francisco County during the same years was

## **SUMMARY**

- When adjusted for the community's racial/ethnic makeup, the overall birth defects rate in Bayview/Hunters Point—44.3 per 1000 births—was not higher than expected.
- Rates of 7 common defects were not unusual.
- There were no patterns among cases to suggest they had a common underlying cause.
- Studying a small area such as Bayview/Hunters Point cannot answer the larger question: Are environmental conditions causing birth defects? The Program is conducting many statewide studies of specific exposures to identify environmental causes of birth defects.

33.1 per 1000 births. This difference reflects the area's racial/ethnic makeup. African Americans—who have a higher overall rate of birth defects—comprise 63% of the births in Bayview/Hunters Point compared to 12% of births in the rest of San Francisco.

- The rate among African Americans in Bayview/Hunters Point (47.7 per 1000 births) was similar to the rate for African Americans in other parts of San Francisco (49.9 per 1000 births).
- In other race/ethnicity categories, there were slight differences, but the numbers were small.

#### **Were specific conditions elevated?**

Many factors—demographics, access to medical care, even how doctors report birth defects—can influence the overall rate. To more reliably assess birth defects occurrence and compare areas, we also routinely consider rates of 7 common, uniformly-diagnosed conditions.

In Bayview/Hunters Point, the rates of these “sentinel” defects—heart defects, oral clefts, chromosome abnormalities, pyloric stenosis, limb defects, neural tube defects, and intestinal atresias—were similar to both county and registry-wide averages.

#### **Were there similarities among cases?**

One of the hallmarks of a teratogen—an environmental cause of birth defects—is that it will produce a distinctive, characteristic pattern of malformations. We found no such patterns among the birth defects in babies born in Bayview/Hunters Point.

We found that one heart defect—transposition of the great vessels—occurred twice as often as expected. The significance of this is unclear. The small number of cases—7 in 11 years—means chance alone may explain the increase.

#### **Are the birth defects in Bayview/Hunters Point related to environmental conditions?**

This question cannot be answered simply by reviewing rates or cases; information about exposures is also needed. Part of the task of the Health and Environmental Project is to evaluate whether residents have actual contact with environmental contaminants.

Finding environmental causes of birth defects requires large well-controlled studies of specific exposures. The California Birth Defects Monitoring Program is conducting many such studies, including one looking at residence near Superfund sites.

### **EVALUATING SMALL AREAS**

Although the California Birth Defects Monitoring Program does not routinely analyze data from small areas such as zip codes or census tracts, we have developed this protocol to respond to specific community concerns about the environment.

The protocol looks for hallmarks seen when an environmental agent has been found to cause birth defects—a dramatic increase in a specific condition, a characteristic pattern of defects, and an exposure in common.

The protocol will uncover major birth defects problems, but generally cannot determine if environmental conditions are causing birth defects. For this, sizeable studies with accurate exposure information are needed.

Steps for evaluating small areas include:

- Comparing overall birth defects observed in the study area to that expected. Expected numbers are calculated from an appropriate comparison group—the county, region and/or entire registry.
- Examining rates of 7 specific birth defects which are common and likely to be uniformly diagnosed statewide: heart defects, oral clefts, chromosome abnormalities, pyloric stenosis, limb defects, neural tube defects, and intestinal atresias.
- Evaluating rates of other conditions if past scientific studies suggest possible links to the environmental exposure of concern.
- Reviewing cases to look for recurring patterns of defects or other similarities.

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